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(54) **TRACKING POSITION OF DEVICE
INSIDE-OUT FOR VIRTUAL REALITY
INTERACTIVITY**

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ABSTRACT

Methods, systems, and computer programs are provided for generating an interactive space. One method includes operations for associating a first device to a reference point in 3D space, and for calculating by the first device a position of the first device in the 3D space based on inertial information captured by the first device and utilizing dead reckoning. Further, the method includes operations for capturing images with a camera of the first device, and for identifying locations of one or more static features in the images. The position of the first device is corrected based on the identified locations of the one or more static features, and a view of an interactive scene is presented in a display of the first device, where the interactive scene is tied to the reference point and includes virtual objects.

